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By- Hoerner, Thomas Allen

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Factors influencing the employment tenure of men qualified to teach vocational agriculture were examined to determine the (1) causes of teachers leaving the vocational agriculture teaching profession, (2) relationships between years as a high school vocational agriculture student and tenure in teaching and (3) relationships between employment tenure in teaching vocational agriculture and background variables of the graduate. Questionnaires and permanent college records were obtained for 1,022 recipients of B.S. degrees in Agricultural Education from 1940 to 1964. Their home background, high school and college record, first employment, and employment in 1964, were among the data collected. Throughout the 25-year period, 32.6 percent of the graduates who had entered teaching were teaching vocational agriculture in 1964. Graduates who had entered vocational agriculture teaching but left for other occupations ranked the following items as having had the greatest influence on their decision: (1) (1) long hours and evening responsibilities, (2) salary and advancement opportunities, (3) community factors, and (4) failure to adjust to the teaching assignments. This is an abstract of a document submitted to Iowa State University of Science and Technology in fulfillment of M.S. degree. (DM)

FACTORS RELATED TO EMPLOYMENT OF IOWA STATE UNIVERSITY GRADUATES IN AGRICULTURAL EDUCATION

Thomas Allen Hoerner

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Department of Education

and

Iowa Agriculture and Home Economics Experiment Station, Ames.>
Iowa State University of Science and Technology
Ames, Iowa

in cooperation with

Vocational Agriculture Section
Division of Vocational Education
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This is an abstract of a dissertation submitted in May of 1965 to Iowa State University of Science and Technology by Thomas Allen Hoerner in partial fulfillment of the requirements for the degree Master of Science.

The study is one of a series conducted by the Department of Education of Iowa State University of Science and Technology with assistance of graduate students in agricultural education in cooperation with the Iowa Agriculture and Home Economics Experiment Station and the Vocational Agriculture Section, Division of Vocational Education, State Department of Public Instruction, Des Moines, Iowa.

This abstract was prepared by Thomas Allen Hoerner with assistance from Dr. John B. McClelland of the Department of Education under the direction of Professor C. E. Bundy.

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FACTORS RELATED TO EMPLOYMENT OF IOWA STATE UNIVERSITY GRADUATES IN AGRICULTURAL EDUCATION

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Purpose of the Study

The purpose of this study was to determine the factors that influenced the employment tenure of men who qualified to teach vocational agriculture. Secondary purposes of the study were: to determine the factors influencing the decision of teachers to leave the vocational agriculture teaching profession, to determine the relationship between having had high school vocational agriculture and tenure in teaching vocational agriculture, and to determine the relationship between employment tenure in teaching vocational agriculture and a group of variables pertaining to the graduate's background.

Method of Procedure

Questionnaires were mailed to the 1127 men who received B.S. degrees in Agricultural Education during the period from 1940 to 1964. Usable responses were received from 1022 of the graduates. Information was also secured from the graduates permanent college records. The data secured from both sources included information concerning the home background of respondents, their high school and college record, their first employment, their employment in 1964 and their responses to lists of factors that may have influenced their decision to enter teaching or to enter other occupations.

Findings

Eighty-nine per cent of the graduates had lived on farms while attending high school and 86.4 per cent of their parents were farmers. Approximately 59 per cent of the parents were farm owner-operator or owner-managers and 15.8 per cent were renters.

More of the fathers (61.6 per cent) than mothers (40.5 per cent) had less than a high school education. Approximately 21 per cent of the fathers and 30.3 per cent of the mothers had educational training beyond the high school level, whereas 26.8 per cent of the mothers compared to only 7.3 per cent of the fathers had at least a B.S. degree in college.

High School Background of Graduates

Thirty-four per cent of the graduates had attended a high school with an enrollment of less than 100, whereas two-thirds of the respondents were graduated from a high school with less than a 200 pupil enrollment. Eleven

and one-half per cent of the graduates had attended a high school with an enrollment of 400 or more pupils. The largest percentage of the graduates (90.4 per cent) had attended Iowa high schools, and 60.9 per cent had enrolled in college within one academic year of their high school graduation. Graduates who had been employed before enrolling in college were primarily in military service (36.4 per cent) or engaged in some type of farming (33 per cent).

Almost 47 per cent of the graduates had not completed any high school vocational agriculture, whereas 33.4 per cent had completed 7 to 8 semesters. Approximately 58 per cent of the graduates had attended high schools offering a vocational agriculture program. Two hundred graduates (19.7 per cent) had completed 1 to 2 semesters of general agriculture.

Less than 1 per cent of the graduates had no high school physics, chemistry or mathematics, whereas 54.5 per cent had completed 5 to 8 semesters. The graduates had completed an average of 5.7 semesters of physics, chemistry and mathematics in high school.

Approximately 50 per cent of the graduates had not been members of the Future Farmers of America organization, 29.6 per cent had received the Chapter Farm degree, 15.4 per cent the State Farmer degree. Only 12 graduates (1.2 per cent) had attained the American Farmer degree.

Factors Related to Enrollment in Agricultural Education

Family members were responsible for influencing 44.5 per cent of the graduate's attendance at college. Twenty-six per cent reported that college attendance was their own idea, whereas 11 per cent were influenced by their high school vocational agriculture instructor. The major sources of finance for college education were: G.I. or Korean Bill, 35.1 per cent; parents, 24.6 per cent; and part-time job during college, 14.3 per cent. Approximately 8 per cent had listed earnings from vocational agriculture or 4-H projects as the major source of finance for the college education.

The fact that Iowa State University was the only agricultural college in Iowa was given by 27.6 per cent of the graduates as the major reason for attending this institution. Other important reasons for enrolling at Iowa State University were: offered agricultural education, 23.2 per cent; Iowa State University's academic prominence, 15.6 per cent; and proximity to Iowa State University, 7.8 per cent.

Almost 28 per cent of the graduates reported that enrollment in the agricultural education curriculum was their own idea, whereas 26.2 per cent had reported that their high school vocational agriculture instructor had influenced their enrollment in this curriculum.

Approximately three-fourths of the graduates had enrolled at Iowa State University during their freshman year in college. However, only 53.5 per cent of the graduates listed agricultural education as their initial curriculum at Iowa State University. As is shown in Table 1, 65 per cent of the graduates who had completed 7 to 8 semesters of high school vocational agriculture enrolled initially in agricultural education, whereas 45.7 per cent of the group members who had no vocational agriculture enrolled initially in this curriculum.

The graduates who had completed 9 to 12 semesters of high school physics, chemistry and mathematics enrolled in agricultural education in 46.5 per cent of the cases, whereas the group which had completed 1 to 4 semesters enrolled initially in this curriculum in 54.2 per cent of the cases.

Table 1. Initial curriculum enrollment at Iowa State University as related to semesters of vocational agriculture completed in high school.

Semesters of vocational agriculture	Curriculum: Other than agricultural education No.	%	agricultural education No.	%	Total	%
0	257	54.3	216	45.7	473	46.9
1-2	24	49.0	25	51.0	49	4.9
3-4	36	52.2	33	47.8	69	6.8
5-6	35	43.2	46	56.8	81	8.0
7-8	118	35.0	219	65.0	337	33.4
Totals	470	46.6	539	53.4	1009	100.0

Graduates were an average of 19.2 years of age at time of college enrollment and 24.1 years of age at graduation. Approximately 45 per cent of the graduates were married at least one year while attending college. About three-fourths of the graduates listed: off-campus housing (27.8 per cent), dormitory 24.3 per cent), or fraternity (20.3 per cent) as their major residence while attending college.

One-fourth of the graduates indicated that they had been a member in the Agricultural Education Club for 4 years, 25 per cent listed 3 years membership, 28.5 per cent listed 2 years and 12.5 per cent indicated that they had not belonged to the Agricultural Education Club during college.

It is shown in Table 2 that approximately 43 per cent of the respondents were aware of vocational agricultural teaching as a possible profession for themselves prior to college enrollment, whereas 25 per cent were not aware of this possibility until their sophomore year in college. Only 28 per cent of the graduates who had completed no vocational agriculture indicated that they were aware of the profession as a possibility prior to college enrollment, whereas 62.8 per cent who had completed 7 to 8 semesters revealed their awareness prior to enrollment in college.

Table 2. Awareness of vocational agriculture as a profession for themselves as related to semesters of vocational agriculture completed in high school.

Awareness of vocational agriculture as a profession	Number by semesters vocational agriculture					Total
	0	1-2	3-4	5-6	7-8	
Before 9th grade	6	1	0	1	15	23
9th - 12th grade	60	11	21	37	149	278
12th and college enrollment	67	10	6	9	49	141
College freshman	102	10	9	12	35	168
College sophomore	155	12	25	11	55	258
Other	72	5	7	13	25	122
Answer not known	12	1	2	0	11	26
Total	474	50	70	83	339	1016

Tenure in Teaching Vocational Agriculture

Information is given in Table 3 concerning the tenure in teaching vocational agriculture of the respondents who had taught in this field at any time from graduation until 1964. Of the 1022 respondents, 654 or 64 per cent had taught vocational agriculture some time after graduation; 570 or 55.8 per cent of the 1022, had entered teaching immediately after graduation; and 186 or 18.2 per cent were teaching vocational agriculture in 1964. The percentage of respondents who were graduated during the various five-year periods and who were teaching vocational agriculture in 1964 ranged from 10.2 per cent of the 1950-55 graduates to 43.0 per cent of the 1960-64 graduates.

Throughout the 25-year period, 32.6 per cent of the graduates who had entered teaching were teaching vocational agriculture in 1964. The mean number of years taught by those teaching vocational agriculture in 1964 was 7.0.

First Employment Areas and Average Incomes

As previously mentioned, over the 25-year period 55.8 per cent of the 1022 graduates in agricultural education entered teaching vocational agriculture as their first employment. During the period of the study, teaching in the veterans on-farm training program was the first employment of 8.7 per cent of

Table 3. Tenure of graduates who have taught vocational agriculture by year of graduation.

Factors related to tenure	Period of Graduation 1940-45	1945-50	1950-55	1955-60	1960-64	Total
Number who have taught Voc. Ag.	64	113	189	212	76	654
Percentage who have taught Voc. Ag.	72.7	72.0	64.1	59.9	59.4	64.0
Number entering Voc. Ag. teaching as first employment.	61	101	154	184	70	570
Percentage entering Voc. Ag. teaching as first employment.	69.3	64.3	52.2	52.0	54.7	55.8
Number teaching Voc. Ag. in 1964.	12	24	30	65	55	186
Percentage teaching Voc. Ag. in 1964.	13.6	15.3	10.2	18.4	43.0	18.2
Mean years taught by those teaching in 1964.	16.3	14.1	9.1	5.4	2.4	7.0
Total Ag. Ed. graduates	88	157	295	354	128	1022

the graduates and college teaching of 2.0 per cent. Thus, some area of teaching was the first employment of 69.1 per cent of the graduates during the twenty-five-year period. Other areas of first employment of the 1022 respondents included: extension service, 5.9 per cent; farming, 5.5 per cent; feed and seed, fertilizer, machinery or livestock industry, 4.9 per cent; government service, 2.4 per cent; military service, 2.1 per cent; and other types of employment, 10.5 per cent.

The mean incomes received by the agricultural education graduates for their first year in all areas of employment ranged from $2463 for the 87 respondents who were graduated during the period of 1940-45 to $5672 for those who were graduated in 1960-64. The mean beginning incomes of vocational agriculture

Table 4. Number of graduates and mean 1963 incomes by employment area and period of graduation.

Employment area	Number of graduates and mean income by period of graduation						
	1940-45	1945-50	1950-55	1955-60	1960-64	Total	%
Voc. ag. instructor	12 $ 7,563	24 8,038	30 7,548	65 6,898	45 6,074	186 7,000	18.2
Farming	10 4,400	12 5,583	27 5,985	46 6,033	9 6,489	106 5,851	10.4
H.S. teacher other than voc. ag.	2 6,000	12 8,717	20 6,585	29 6,320	5 5,900	68 6,781	6.7
School administration	1 10,400	7 7,486	3 8,533	15 6,983	1 6,650	27 7,400	2.7
Extension service	7 11,171	17 8,476	17 8,156	21 5,746	5 6,520	69 7,675	6.8
Government	6 8,133	10 7,655	9 9,539	21 6,600	7 4,342	53 7,173	5.2
Fertilizer business	4 9,000	3 11,667	12 10,108	18 7,844	1 6,500	39 8,947	3.8
Feed and seed business	4 12,450	12 10,758	33 8,955	20 8,020	4 6,975	73 9,078	7.2
Radio or TV			2 8,750			2 8,750	.2
Livestock industry	1 13,000	3 9,167	9 8,355	6 7,066	3 6,800	22 8,113	2.2
College teaching	7 13,171	10 12,820	18 9,764	11 7,032	1 6,500	47 10,213	4.6
Sales, other than ag. products	5 12,560	7 8,843	13 10,377	6 10,083	1 8,800	32 10,278	3.1
Machinery business			2 12,300	3 6,900		5 9,060	.5
Petroleum business			1 5,700	2 6,050		3 5,933	.3
Banking	3 10.560	6 12,033	16 9,488	17 7,201	7 5,371	49 8,484	4.8
Insurance	1 11,000	4 10,750	9 11,588	4 10,550	2 5,200	20 10,545	2.0
Journalism			3 10,400	3 7,500		6 8,950	.6
Private business	9 13,822	2 18,600	13 7,783	7 7,371	2 5,750	33 9,875	3.2

Table 4 con't.

Employment area	Number of graduates and mean income by period of graduation 1940-45	1945-50	1950-55	1955-60	1960-64	Total	%
Other	14	27	44	43	9	137	13.5
	9,603	11,230	8,928	6,824	5,978	8,159	
Military service	0	0	8	10	7	25	2.4
Graduate School	0	1	4	6	4	15	1.5
Total	86	157	293	353	128	1,017	
Mean income	10,005	9,445	8,625	6,902	6,023	8,002	

instructors were a little below the mean beginning incomes of all graduates during the first two 5-year periods but above the mean incomes of all graduates for the last three five-year periods. During the most recent period, 1960-64, the mean beginning incomes of the 70 graduates who taught vocational agriculture was $5908 which was $236 higher than the mean of $5672 for all 128 respondents who received their degrees during that period.

Employment Areas in 1964 and Average Income in 1963

In Table 4 information is given concerning the number of graduates in various areas of employment in 1964 and their 1964 incomes by period of graduation. Of the 1017 graduates who reported concerning employment and salaries, 186 (or 18.2 per cent) were teaching vocational agriculture in 1964, 6.7 per cent were teaching other high school subjects, 2.7 were in school administration and 4.6 per cent were in college teaching. Thus, a total of 32.2 per cent were employed in some area of education. An additional 6.8 per cent were employed in agricultural extension.

In 1964 a total of 13.7 per cent of the respondents were employed in feed and seed, fertilizer, livestock or farm machinery firms. Other areas of employment included farming, 10.4 per cent; government service, 5.2 per cent; banking, 4.8 per cent; private business, 3.2 per cent; sales, other than agricultural products, 3.1 per cent; and some other occupations.

The mean income of the 186 graduates who were teaching vocational agriculture in 1964 was $7000 in 1963, whereas that of all 1017 respondents was $8002. However, it should be noted that the 1963 mean annual income of the 1960-64 graduates who were teaching vocational agriculture in 1964 was $51 higher than the mean of all graduates of that period. The 1963 mean incomes for the 1955-60 graduates were approximately the same for the two groups. But the men who were graduated during the three earlier five-year periods from 1940-1955 and who were teaching vocational agriculture in 1964 received mean incomes in 1963 that were lower than the mean incomes of all graduates of those earlier periods. The differences between the mean 1963 incomes of men in the two groups who were graduated during the period from 1940 to 1955 tended to increase as the length

of time after graduation increased. The 12 teachers of vocational agriculture who had been graduated in the earliest period included in the study, 1940-45, received a mean income of $7563 in 1963, whereas the mean income of all 86 agricultural education graduates of that period was $10,005 in 1963.

Factors Influencing Choice of Occupation

Respondents ranked the factors which influenced the choice of their first area of employment on a five-point scale. The 1022 graduates indicated that the factors which had the greatest influence on this decision were (1) felt best trained in this area, (2) working closely with people, (3) freedom and independence of the job and (4) salary. The 570 respondents who entered teaching vocational agriculture as their first area of employment ranked the first and second factors influencing their choice the same as all 1022 respondents but they ranked salary as the third most important influence in the list of 24 items that were ranked.

The factors which had the greatest influence on the respondents' decisions to enter their 1964 area of employment were (1) felt best trained in this area, (2) freedom and independence on the job, (3) salary, (4) working closely with people, (5) opportunity for advancement and (6) security.

Graduates who had entered vocational agriculture teaching but left for other occupations ranked the following items as having had the greatest influence on their decision to leave the profession: (1) long hours and evening responsibilities, (2) salary and advancement opportunities, (3) community factors, (4) inter-personal problems and (5) failure to adjust to the teaching assignments.